words, the switch can be opened and closed multiple times, such as the memory bits in a random access memory (RAM) or a color pixel in a display.

[0035]   The term "bi-stable" as applied to a molecule means a molecule having two relatively low energy states separated by an energy (or activation) barrier. The molecule may be either irreversibly switched from one state to the other (singly configurable) or reversibly switched from one state to the other (reconfigurable).

[0036]   Micron-scale dimensions refers to dimensions that range from 1 micrometer to a few micrometers in size.

[0037]   Sub-micron scale dimensions refers to dimensions that range from 1 micrometer down to 0.05 micrometers.

[0038]   Nanometer scale dimensions refers to dimensions that range from 0.1 nanometers to 50 nanometers (0.05 micrometers).

[0039]   Micron-scale and submicron-scale wires refers to rod or ribbon-shaped conductors or semiconductors with widths or diameters having the dimensions of 0.05 to 10 micrometers, heights that can range from a few tens of nanometers to a micrometer, and lengths of several micrometers and longer.   .

[0040]   "HOMO" is the common chemical acronym for "highest occupied molecular orbital", while "LUMO" is the common chemical acronym for "lowest unoccupied molecular orbital". HOMOs and LUMOs are responsible for electronic conduction in molecules and the energy difference between the HOMO and LUMO and other energetically nearby molecular orbitals is responsible for the color of the molecule.

[0041]   An electronic ink, in the context of the present invention, involves switchable changes in the electro-magnetic properties of the molecules, within that spectral region detectable by the human eye. Switching of electronic ink molecules includes changes in properties such as absorption, reflection, refraction, diffraction, and diffuse scattering of electro-magnetic radiation.

Electronic Ink

[0042]   Field addressable rewritable media are described in greater detail in co-pending U.S. application Serial No. 09/919,364, filed on 7/31/01 [PD-10011314-1]. A